

CLAIMS:

1. In a layered encoding system having at least one layer comprising a plurality of sub-layers, a method for encoding a video image (200), composed of a plurality of pixel blocks, containing at least one area determined to be significant (210) within a corresponding sub-layer (272, 274, 276), said method comprising the steps of:
 - 5 a. associating a level of significance with each block of a known size (250, 252) within said at least one significant area (210);
 - b. associating a level of significance with each of at least one successively larger blocks (222, 244) dependent upon said level of significance of at least one of said blocks (250, 252) of a known size contained within said successively larger block (222, 244);
 - 10 and
 - c. mapping each of said associated levels of significance.
2. The method as recited in claim 1, further comprising the step of:
repeating steps a-c for each of said sub-layers.
- 15 3. The method as recited in claim 1, further comprising the step of:
transmitting said significance level mapping corresponding to said sub-layer.
4. The method as recited in claim 1, wherein said layer encoding system is a Fine
20 Granular Scalable (FGS) System.
5. The method as recited in claim 4, wherein said sub-layer is a bit-plane (272, 274, 276).
- 25 6. The method as recited in claim 1, wherein said block size is selected from a predetermined set of sizes.
7. The method as recited in claim 1, wherein said successively larger block has a known maximum value.

8. A system (400) for encoding (100) a video image (200) formed as a plurality of pixel blocks into at least one layer wherein one of said layers is composed of a plurality of sub-layers (272, 274, 276), said sub-layer including at least one significant area (210),

5 comprising:

means (165) for associating a level of significance with each block of a known size (250, 252) within said at least one significant area (210);

means (165) for identifying a level of significance with each of at least one successively larger block (222, 244) dependent upon said level of significance of at least one
10 of said blocks (250, 252) of a known size contained within said successively larger block (222, 244); and

means (165) for mapping said level of significance.

9. The system as recited in claim 8, wherein said mapping includes information
15 regarding each of said blocks of known size and successive blocks having a known level.

10. The system as recited in claim 8, wherein said known level is representative of a non-zero coefficient.

20 11. A decoding system for decoding images transmitted as a layer encoded signal, comprising:

means for receiving data corresponding to a significance mapping of at least one sub-layer of said layered encoding signal;

means for decoding said significance map; and

25 means for reconstructing a corresponding one for said sub-layers from said significance map.

12. The decoding system as recited in claim 11, further comprising:

means for receiving said layer encoded signal transmitted over a network.

30 13. The decoding system as recited in claim 11, wherein said significance map includes information regarding blocks containing significant information.